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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,396	10/05/2004	Cecilia Rydin	5848.180USWO	9967
23552	7590	12/22/2005	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			WU, IVES J	
			ART UNIT	PAPER NUMBER
			1713	
DATE MAILED: 12/22/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/510,396	Applicant(s) RYDIN ET AL.	
	Examiner Ives Wu	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-26 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All . b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

(1). The applicant's Remarks and Amendments filed on October 31, 2005 has been received and fully acknowledged with the following results.

Claims 2, 3, 6, 8, 13 and 15 are amended. Claims 21-26 are newly added.

The objections for claims 2, 3, 6, 8, 13 and 15 in the prior Office Action dated May 31, 2005 is withdrawn in response to the Amendments filed on October 31, 2005.

The rejection for claim 1 in the prior Office Action dated May 31, 2005 is modified according to the applicant's Remarks filed on October 31, 2005.

The rejections for new claims 21-26 are presented in succeeding paragraphs with modified rejection for claims 1 and the original rejections for claims 2-4, 6-20 from the prior Office Action dated May 31, 2005.

Claim Rejections - 35 USC § 103

(2). The text of those sections of Title 35, U.S. Code not included in this Office Action can be found in the prior Office Action dated May 31, 2005.

(3). Claims 1-4 and 6-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hesse et al (US20030157286A1) in view of Baran et al (ISSN: 0322-7340), and further in view of Jarrin et al (US005218016A).

As to the component of β -nucleating agent with 0.0001-2.0 wt% in the composition of **independent claim 1**, Hesse et al (US20030157286A1) **teach optional**, using up to 3 wt% of nucleating agent (α -nucleating agent) in the composition, [0039], line 4-5. The polymers of

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compound B composition are selected from propylene homopolymers with stereospecificity index greater than 98% ([0044], line 1-2).

Hesse et al (US20030157286A1) **do not teach** a β -nucleating agent in the composition. However, it is well known in the art to add a β -nucleating agent to a propylene polymer such as taught by Baran. Baran et al (ISSN:0322-7340) **teach** the addition of a β -nucleating agent: N,N'-dicyclohexyl -2,6- naphthalenedicarboxamide in the isotactic polypropylene to improve the toughness of isotactic polypropylene by introducing more β -phase crystallinity, see abstract and the paragraph of introduction & experiment.

Therefore, it would have been obvious at the time of applicant's invention to use a β -nucleating agent taught by Baran into the Hesse's et al propylene polymer in order to achieve the advantage aforementioned, motivated by a reasonable expectation of success.

As to the **microsphere** component in the composition of **independent claim 1**, Hesse et al (US20030157286A1) **teach** using fillers as auxiliary substances, [0009].

Both Hesse et al (US20030157286A1) and Baran et al (ISSN:0322-7340) **do not teach** fillers to be microspheres in the β -nucleated propylene polymer.

However, Jarrin et al (US005218016A) **teach** using a new **filler**, Col. 1, line 10; to be hollow **microsphere** in the composition, Abstract, line 7.

The advantage of mixing the microsphere as filler in the propylene polymer is to resist against hydrostatic pressure, Abstract, line 7-9.

It would have been obvious at time of applicant's invention to modifying Hesse's et al teaching of polypropylene polymer and Baran's et al teaching of β -nucleating agent by adding jarrin's et al microspheres as filler in the composition because it will achieve the advantage

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aforementioned. Furthermore, the filler is taught as a genus in Hesse's et al, microsphere is disclosed as a species of the filler of Jarrin's et al, one of ordinary skill in the art would have expected all species work well for a genus, motivated by reasonable expectation of success, *In re O'Farrell*, 853 F.2d 894, 903, 7 USPQ2d 1673, 1681 (FED. Cir. 1988).

As to the composition to be a syntactic polyolefin in **independent claim 1**, in view of applicant's disclosure on page 1, line 25-26, it meets the definition of syntactic polyolefin composition by the combination of Hesse's et al teaching and Jarrin's et al teaching.

As far as the elongation at least 3% is concerned, in view of substantially identical polypropylene compound materials disclosed by the combined references, it is examiner's position to believe that the composition disclosed by combination of Hesse's et al polypropylene polymer, Jarrin's et al microspheres and Baran's et al β -nucleating agent must inherently possess the same elongation percentage. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to the applicant to establish an unobviousness difference. *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980).

As to the composition melt flow rate in **independent claim 1**, Hesse et al (US20030157286A1) disclose the resulting propylene compound has a melt index of 0.38 g/10 min in example 1, [0111], in view of substantially identical propylene polymer composition disclosed by combined teaching of Hesse et al and Baran et al, Jarrin et al, and by applicant, it is the examiner's position to believe that the β -nucleated propylene polymer of Hesse et al and Baran et al, Jarrin et al would inherently possess the melt flow index as claimed. Since USPTO does not have proper means to conduct the experiments, the burden now is shifted to the applicant's to prove otherwise. *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980).

As to the component of β -nucleated propylene polymer in the composition of **independent claim 1**, the disclosure of the combined teaching of Hesse et al and Baran et al, Jarrin et al meets the requirements of the present claim both in terms of the types of propylene polymer and β -nucleating agent added and their contents. It is reasonable to presume that the compound of the combined references would be a β -nucleated propylene polymer as presently claimed in light of their chemical similarities. The burden is shifted to the applicants to establish that the β -nucleated propylene polymer of the present claim is not the same as or obvious as that set forth by the combined references.

(4). **Claims 2-4, 6-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hesse et al (US20030157286A1) in view of Baran et al (ISSN: 0322-7340), and further in view of Jarrin et al (US005218016A) for the same rationale in the prior Office Action dated May 31, 2005.

(5). As to the composition melt flow rate in **dependent claim 21**, Hesse et al (US20030157286A1) disclose the resulting propylene compound has a melt index of 0.38 g/10 min in example 1, [0111], in view of substantially identical propylene polymer composition disclosed by combined teaching of Hesse et al and Baran et al, Jarrin et al, and by applicant, it is the examiner's position to believe that the β -nucleated propylene polymer of Hesse et al and Baran et al, Jarrin et al would inherently possess the melt flow index of 1.0-5g/10min as claimed. Since USPTO does not have proper means to conduct the experiments, the burden now is shifted to the applicant's to prove otherwise. *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980).

(6). As to limitation of the elongation at break > 10% is the **dependent claim 22**, in view of substantially identical polypropylene compound materials disclosed by the combined references, it is examiner's position to believe that the composition disclosed by combination of Hesse's et

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al polypropylene polymer, Jarrin's et al microspheres and Baran's et al β -nucleating agent must inherently possess the same elongation percentage as claimed. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to the applicant to establish an unobviousness difference. *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980).

(7). As to the amount of polyolefin to be 15 – 20 wt% in **dependent claim 23**, Hesse et al disclose a compound with 5-80 wt% which is selected from modified propylene polymers ([0079], line 1-2).

(8). As to the compression strength to be > 15 MPa in the **dependent claim 24**, Hesse et al disclose that the compression strength at 5% compression of the samples was determined according to ASTM F685-96 ([0135]); results of the compression are tabulated in paragraph [0136], they are > 15 Mpa.

(9). As to the microsphere having an outer diameter of 5-200 μm in the **dependent claim 25**, Jarrin et al disclose that the granulometric distribution will be such that 80 wt% of the particles will be smaller than 1 mm and the average size of the particles will range from 200-600 μm (Col. 4, line 36-39).

(10). As to the microspheres in an amount of 20-30 wt% in the **dependent claim 26**, in absence of showing the criticality of the records, the optimization value of microspheres wt% in a known process renders *prima facie obviousness* within one ordinary skill in the art. *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980).

Allowable Subject Matter

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

(11). Applicant's arguments filed on October 31, 2005 have been fully considered but they are not persuasive.

(12). Regarding to the issue of tradeoff between toughness and stiffness when beta-nucleating agent is added in the propylene polymer of Hesse et al in the combined teaching of Hesse et al (US20030157286A1) and Baran et al (ISSN: 0322-7340), Jarrin et al (US005218016A) for rejection of applicant's claim 1, the beta-nucleating agent will improve the toughness of propylene polymer taught by Baren et al (ISSN: 0322-7340), however, the stiffness of propylene polymer will not change, because it is now a common knowledge that an increase in stiffness leads to a decrease in toughness and vice versa, it has surprisingly been found that combining β -nucleation and a propylene polymer having strain hardening behavior does not have this oppositely oriented effect. Therefore, applicant's argument is not well taken and the rejections for claims 1-4 and 6-20 are sustained. Claims 1-4 and 6-26 remain pending.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ives Wu whose telephone number is 571-272-4245. The examiner can normally be reached on 8:00 - 5:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner: Ives Wu

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Date: December 15, 2005



DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700